

What is claimed is:

1. A photosensor-amplifier device comprising:
  - a photoelectric conversion circuit that converts an optical signal into an electric signal;
  - 5 a first electrode by way of which the electric signal is extracted from the photoelectric conversion circuit;
  - a second electrode that is not directly connected to the electric signal;
  - an amplifier circuit that has a first input terminal and a second input terminal and that amplifies and then outputs a difference between electric signals fed to the first and second input terminals;
  - 10 a first wire that connects the first electrode to the first input terminal; and
  - a second wire that connects the second electrode to the second input terminal.
- 15 2. A photosensor-amplifier device as claimed in claim 1, wherein identical bias voltages are applied to the first and second input terminals.
- 20 3. A photosensor-amplifier device as claimed in claim 1, wherein the first and second wires have substantially identical lengths and are laid substantially parallel.
4. A photosensor-amplifier device as claimed in claim 1, wherein a distance between the first electrode and the first input terminal

and a distance between the second electrode and the second input terminal are substantially identical, and a distance between the first and second electrodes and a distance between the first and second input terminals are substantially identical.

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5. A photosensor-amplifier device as claimed in claim 1,

wherein the photoelectric conversion circuit includes a photodiode built by joining an N-type semiconductor and a P-type semiconductor together.

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6. A photosensor-amplifier device as claimed in claim 5,

wherein the photoelectric conversion circuit further includes a dummy photodiode built by shielding a top surface of a photodiode from light.

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7. A photosensor-amplifier device as claimed in claim 1, further comprising:

a substrate on which a first element formed as the photoelectric conversion circuit and a second element formed as the amplifier circuit are mounted; and

a first conductor pattern and a second conductor pattern formed on the substrate,

wherein the first wire connects the first electrode to the first input terminal  
20 by way of the first conductor pattern and the second wire connects the second electrode to the second input terminal by way of the second conductor pattern.

8. A photosensor-amplifier device as claimed in claim 7,

wherein, when the first and second wires are bonded, a first-bonding

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operation is performed on the first and second elements and a second-bonding operation is performed on the first and second conductor patterns, respectively.

9. An infrared communication device incorporating a photosensor-  
5 amplifier device,

wherein the photosensor-amplifier device comprises:

a photoelectric conversion circuit that converts an optical signal into an electric signal;

- 10 a first electrode by way of which the electric signal is extracted from the photoelectric conversion circuit;

a second electrode that is not directly connected to the electric signal;

an amplifier circuit that has a first input terminal and a second input terminal and that amplifies and then outputs a difference between electric signals fed to the first and second input terminals;

- 15 a first wire that connects the first electrode to the first input terminal; and

a second wire that connects the second electrode to the second input terminal.

- 20 10. A photosensor-amplifier device comprising:

a photodiode that receives at a cathode thereof a supply voltage;

a diode that receives at a cathode thereof the supply voltage;

a first electrode that is connected to an anode of the photodiode;

a second electrode that is connected to an anode of the diode;

an amplifier circuit that has a first input terminal and a second input

terminal and that amplifies and then outputs a difference between electric signals fed to the first and second input terminals;

a first resistor that is connected between the first input terminal and ground;

5 ground;

a first wire that connects the first electrode to the first input terminal; and

a second wire that connects the second electrode to the second input

terminal.

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